REMARKS

Applicants thank the Examiner for the interview of May 21, 2007. No further claim amendments are offered with this supplemental response. The subject matter of the interview is summarized by the remarks below.

I. Claims 1 – 15

The rejection of claims 1 – 15 under 35 U.S.C. §102(b) over Brignac, U.S. Patent 6,197,178, is respectfully traversed.

The claimed invention is patentable in view of the cited reference

As an initial matter, Applicants note that a rejection under 35 USC 102(b) is not appropriate, as Brignac clearly does not describe use of an olefinic naphtha for activation of a supported catalyst. Thus, the following remarks are directed to demonstrating that the claimed invention is nonobvious and therefore patentable in view of the cited reference.

Brignac does not explicitly describe the use of olefinic naphtha for catalyst activation. In fact, Brignac does not provide any suggestion that olefinic naphtha can be substituted for virgin naphtha during catalyst activation. Brignac does describe the use of olefinic naphtha for hydrodesulfurization at Col. 3, line 32 – Col. 4, line 67. Brignac further describes tests to determine the effectiveness of catalyst activation in Examples 1 and 2. In these tests, an already activated catalyst is exposed to a cat naphtha feed to determine the activity of the catalyst over time. However, all of the description provided in Brignac for catalyst activation requires the use of virgin naphtha. This corresponds to the invention claimed in Brignac, and no suggestion is provided that cat naphtha (or another olefinic naphtha) can be used instead of virgin naphtha for activation.

No motivation existed for those of skill in the art to modify Brignac to arrive at the claimed invention.

Brignac provides no suggestion or motivation to modify the teachings of Brignac to arrive at the claimed invention. Therefore, in order to form a prima facie case of obviousness, a motivation or suggestion to modify Brignac by substituting olefinic naphtha for virgin naphtha would need to be provided either by the nature of the problem to be solved, or by the knowledge of one of ordinary skill in the art. (See In re Kotzab, 217 F.3d 1365 (Fed. Cir. 2000); MPEP 2143.01(I).) Neither of these sources provides such a motivation.

One of the reasons that hydrodesulfurization catalysts are activated prior to use is due to the potential for rapid degradation of the hydrodesulfurization activity of the catalyst. As catalysts are exposed to naphtha feeds, the catalysts lose activity over time, eventually becoming irreversibly deactivated. (See paragraph 10 of the specification. Brignac similarly highlights this concern at Col. 2, lines 1 – 13.) Prior to activation, the catalyst is particularly susceptible to deactivation if highly reactive species are present, such as olefins. Thus, the nature of the problem to be solved by the activation step is to prevent active species, such as olefins, from coking or otherwise causing deactivation of the hydrodesulfurization activity.

Conventionally, hydrodesulfurization catalysts were "activated" using an all gas phase process by exposing the catalyst to sour gas (e.g., natural gas containing H_2S). Brignac provides a method that also includes a liquid phase, which is more commercially convenient. Virgin naphtha was selected in Brignac for the activation step in order to avoid introducing olefins to the catalyst prior to activation. As noted in Brignac at Col. 1, lines 40 – 49, it was conventionally understood that activation of a hydrodesulfurization catalyst using an olefinic naphtha feed under hydrodesulfurization conditions would lead to significant loss of olefins from the feed. Olefinic naphtha feeds are desirable components for gasoline, as the olefins contribute to higher octane ratings. The loss of olefins from an olefinic naphtha feed during an activation process would result in

degradation of the naphtha. The naphtha would then need to undergo further refining to be useful as a component for motor gasoline, resulting in substantial additional expense. Thus, based on the information provided in Brignac, neither the nature of the problem to be solved nor the conventional understanding in the art suggested that it would be beneficial to activate a hydrodesulfurization catalyst using an olefinic feed.

Brignac overcame the problem of loss of olefins by using virgin naphtha for catalyst activation. Because virgin naphtha contains little or no olefins, virgin naphtha is already a low octane feed and does not suffer further octane reduction during catalyst activation. However, use virgin naphtha to activate a catalyst requires introduction of a feed not normally used into a reactor, and virgin naphtha is not as readily available in a refinery setting as an olefinic naphtha. Thus, use of virgin naphtha both introduced additional cost and inconvenience.

Applicants have now discovered that olefinic naphtha can be substituted for virgin naphtha without degradation of catalyst activity and without loss of olefins beyond the level expected during hydrodesulfurization. As demonstrated in Examples 1 – 4 in the specification, activating a catalyst using the claimed temperature profile and using olefinic naphtha not only retains olefins, but the catalyst shows superior olefin retention after the activation period while maintaining similar hydrodesulfurization activity. This is an unexpected result in view of the conventionally understood need to activate hydrodesulfurization catalysts prior to exposure to olefins. The fact that applicants discovered the suitability of olefinic naphtha for activation of a hydrodesulfurization catalyst, a finding contrary to accepted wisdom, is itself evidence that the claimed invention is not obvious. (See In re Hedges, 783 F.2d 1038 (Fed. Cir. 1986); MPEP 2145 (X.D.3).)

For at least these reasons, the claimed invention is not obvious in view of Brignac. Applicants respectfully request reconsideration and withdrawal of the obviousness type double patenting rejection in view of Brignac.

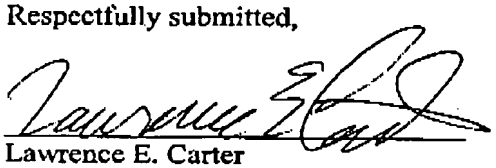
II. Conclusion

Having demonstrated that all rejections of claims have been overcome, this application is in condition for allowance. Accordingly, applicants request early and favorable reconsideration in the form of a Notice of Allowance.

If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated, since this should expedite the prosecution of the application for all concerned.

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response. Please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1330 (Docket #: P2003J007).

Respectfully submitted,



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[X] Pursuant to 37 CFR 1.34(a)

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